

GSFC's Earth Sciences (GES)  
Distributed Active Archive Center (DAAC)  
Status on Ingest & Production of MODIS Data

Presentation to MODIS Science Team

May 4, 1999

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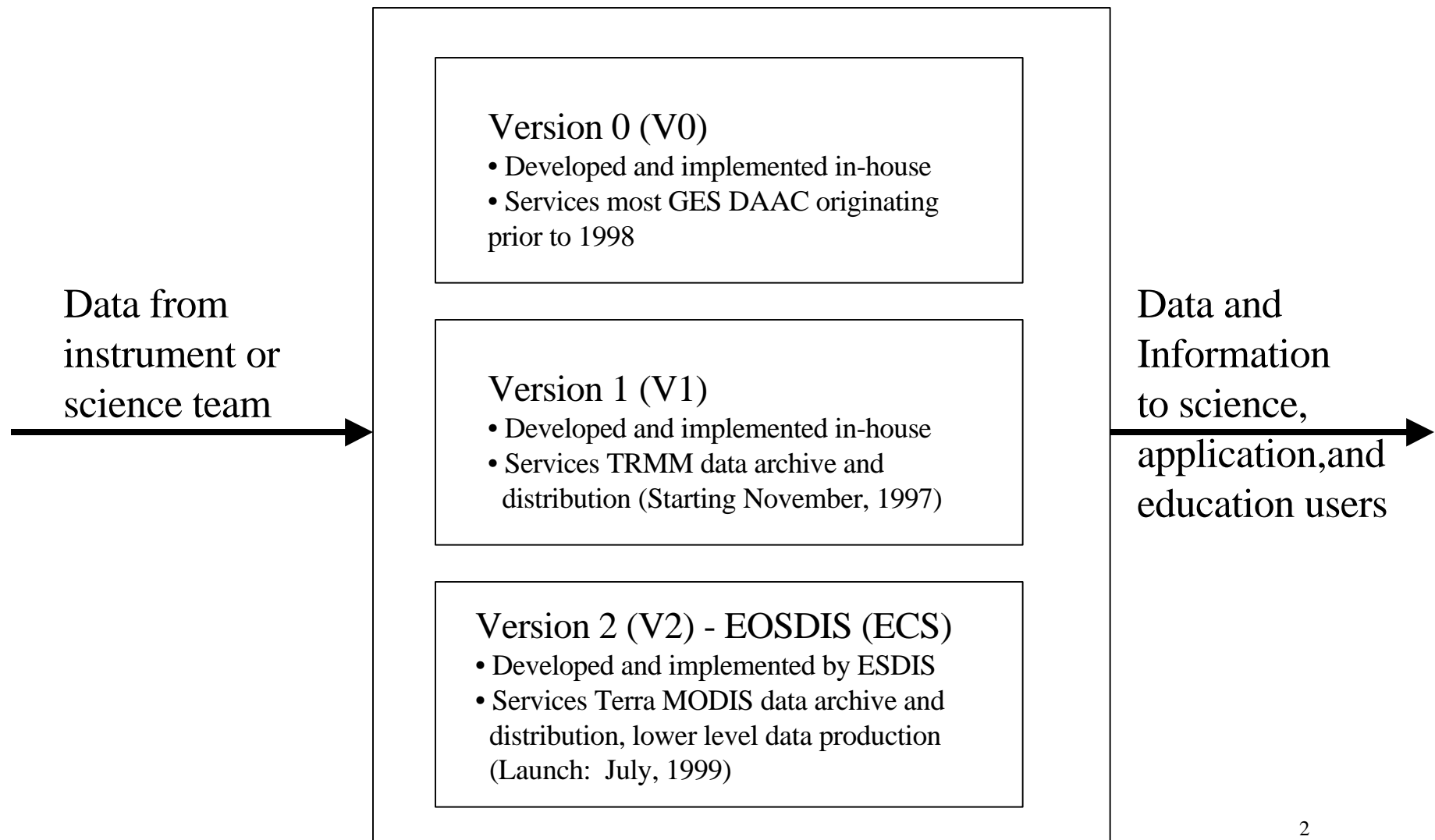
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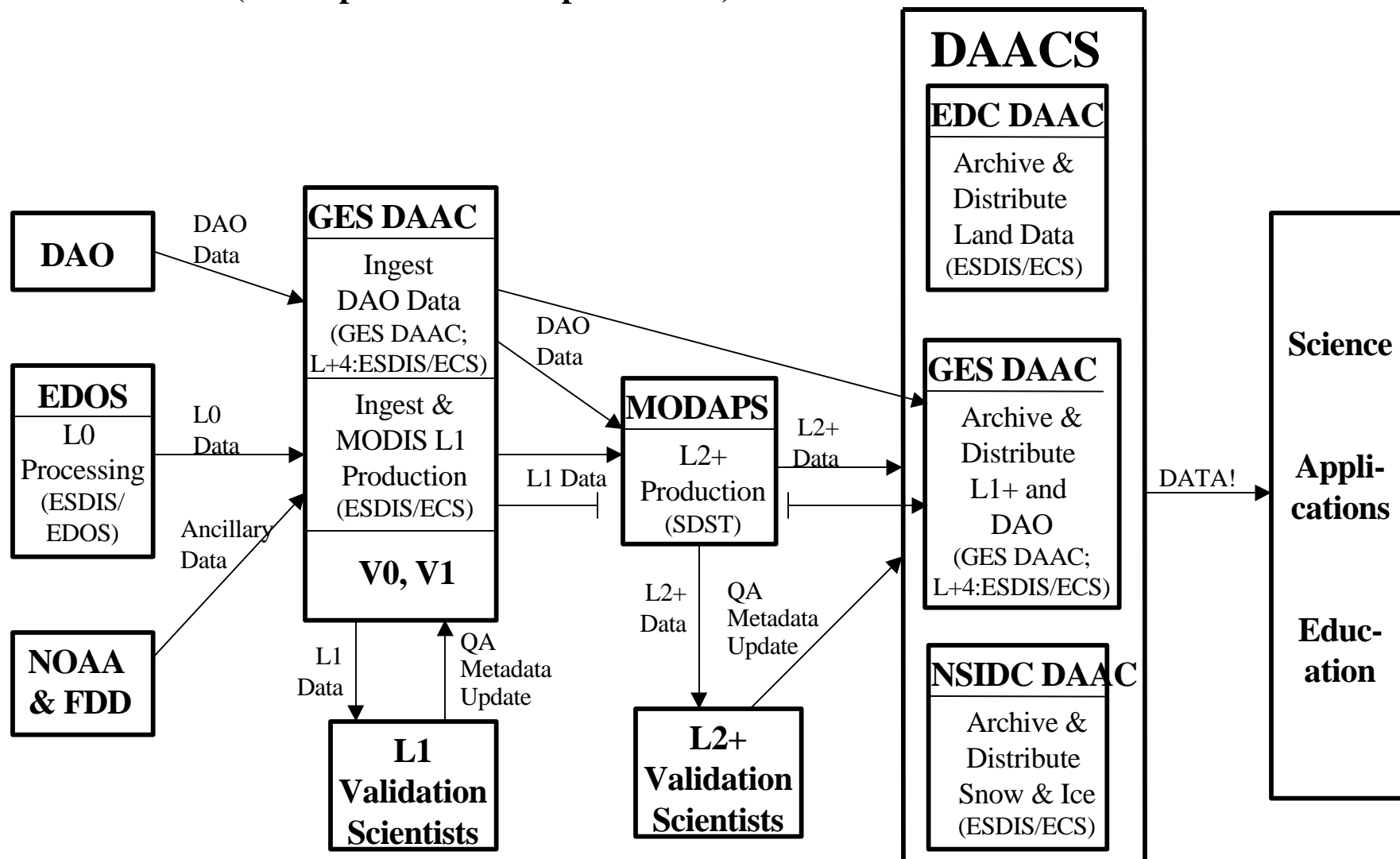
<http://daac.gsfc.nasa.gov>

# GES DAAC - DATA FLOW



# At Launch MODIS Data Flow

(Development Team in parenthesis)



# Operations Status: Operational Readiness Exercises (OREs)

- Tracking progress via ~59 GES DAAC Launch Critical Capabilities: Functionality and Performance
  - Red - Not yet demonstrated on 4PY at GDAAC in any mode
  - Yellow - Demonstrated at GDAAC on 4PY but in a mode other than Ops or a version not currently installed in Ops
  - Green - Demonstrated at GDAAC in Ops Mode on the most recent version of 4PY
- | Status: | Functionality         | Performance |
|---------|-----------------------|-------------|
| – 4/13  | ~ 8 Green, 9 Yellow   | All Red     |
| – 4/20  | ~ 15 Green, 15 Yellow | All Red     |
| – 5/3   | ~ 32 Green, 18 Yellow | All Red     |
- Moving on:
  - Work through OREs until all Green
  - Work off problems with ESDIS/ECS: Install patches (quick turnaround)
  - Work performance issues
  - Keep pushing the system with more and more data: Push interfaces for functionality and performance; Move into routine operations

## Operations Status of GDAAC Launch-Critical Capabilities

Activity		Functionality Demonstrated	Performance Demonstrated	ORE	Comments
<b>Ingest:</b>	MODIS L0 data	Yes	No	1	Using MOD000
	MODIS Expedited data	No	No	21	problem; TT 1020
	Aster Expedited data	Yes	No	22	
	EDOS s/c ancillary data	Maybe	No	36	All but APID05 - not received
	FDD attitude data	Yes	No	2	
	(Larry) NCEP Final Analysis (GDAS_0ZF)	No	No	2	NCR 18417; our format bad
	(Larry) TOVS Column Ozone Daily Product (OZ_DA	Maybe	No	2	TT 1095
	(Larry) EP-TOMS Column ozone (OZONEEP)	Maybe	No	2	Set-up, but not fully checked
	(Larry) Reynolds weekly SST (REYNSST)	Yes	No	2	
	(Larry) NCEP 0.5 degree Ice Concentration (SEA I	Yes	No	2	
	(Larry) FNMOC Ocean Mixed Layer Depth (FNMOC	Yes	No	2	
<b>Archive:</b>	MODIS L0 data	Yes	No	1	MOD000 used
	FDD attitude data	Yes	No	2	
	(Larry) NCEP Final Analysis (GDAS_0ZF)	No	No	2	NCR 18417
	(Larry) TOVS Column Ozone Daily Product	Maybe	No	2	ingest not reliable
	(Larry) EP-TOMS Column ozone	Maybe	No	2	Set-up, but not fully checked
	(Larry) Reynolds weekly SST	Yes	No	2	
	(Larry) NCEP 0.5 degree Ice Concentration	Yes	No	2	
	(Larry) FNMOC Ocean Mixed Layer Depth	Yes	No	2	
	DPREP output	Maybe	No	36	Not at-launch version
	MODIS L1A	Yes	No	3	
	MODIS Geolocation	Yes	No	3	
	MODIS L1B	Yes	No	6	
	MODIS Cloud Mask	Yes	No	9	
	MODIS Atmospheric Profiles	Yes	No	9	
	MODIS Volcano Alert	Yes	No	9	
<b>Produce:</b>	DPREP of APID 4 and FDD data	Maybe	No	36,38	Not at-launch version
	MODIS L1A	Yes	No	3	Instrum. Activation data used
	MODIS Geolocation	Yes	No	3	Instrum. Activation data used
	MODIS L1B	Yes	No	6	
	MODIS L1B Subsets for LaTIS	No	No	34	PGE not ready yet
	MODIS Cld Mask, Atm Profiles, Volc Alert	Maybe	No	9	Requires GDAS; bad format
<b>Distribute:</b>	DPREP Output to MODAPS	Yes	No		
	Geolocation to MODAPS	Yes	No		
	MODIS L1B to MODAPS	Yes	No	7	

## Operations Status of GDAAC Launch-Critical Capabilities

Activity	Functionality Demonstrated	Performance Demonstrated	ORE	Comments
MODIS Cloud Mask to MODAPS	Maybe	No	9.5	
Atmospheric Profile to MODAPS	Maybe	No		
Ancillary data to MODAPS	Maybe	No	7	Sent 2 of 6 types
Subsetted MODIS L1B to LaTIS	Maybe	No	34	Sent sample; proved data link
APID 4 to LDAAC	Maybe	No	34	Need EDOS to correct name
MODIS L1A for science QA	Yes	No	4	
MODIS Geolocation for science QA	Yes	No	4	
MODIS L1B for science QA	No	No	7	have not test ops procedures
MODIS Cloud Mask for science QA	Yes	No	9.5	
MODIS Atmospheric Profiles for science QA	Yes	No	10	
MODIS Volcano Alert for science QA	Maybe	No	10	
MODIS Expedited Data to MCST	Maybe	No	21	MOD00X
ASTER Expedited Data to ASTER GDS	Yes	No	22	
ASTER Expedited Data to EDC	Yes	No	22	
Subscriptions to users	Yes	No	16,17	
Ad-hoc Requests to users	No	No	11,12,17	
<b>Interoperate with V0: Validates, Search &amp; Order</b>	Maybe	No	33	S&O from GDAAC successful
<b>Update Metadata:</b> MODIS L1A	No	No	5	Not QA-able?
MODIS Geolocation	Maybe	No	5	
MODIS L1B	Maybe	No	8	
MODIS Cloud Mask	Yes	No	10	
MODIS Atmospheric Profiles	Yes	No	10	
MODIS Volcano Alert	No	No	10	Not QA-able?
<b>Update PGEs:</b> Any PGE in Production	No	No	14,15,19,20	Procedure not tested in Ops

Key:

<b>Yes</b>	Demonstrated at GDAAC in Ops Mode on the most recent version of 4PY
<b>No</b>	Not yet demonstrated on 4PY at GDAAC in any mode
<b>Maybe</b>	Demonstrated at GDAAC on 4PY but in a mode other than Ops or on a version not currently installed in Ops.

# Science Software Integration & Test (SSIT)

- Status:
  - Currently in operations:
    - PGE01 V2.1, PGE02 V2.0, PGE03 V2.0
  - Being delivered:
    - PGE02 V2.1.5, PGE03 V2.1
  - Launch Ready Versions:
    - PGE01 V2.1 (in SSIT), PGE02 V2.2 (5/30), PGE03 V2.2 (5/14), PGE71 (6/15)
- SSIT Turnaround:
  - New Version of Software - 2 weeks minimum (everything checks out first try)
  - Fixes, Patches, etc. - Hours to Days, depending on complexity of update

# **Ingest and Production Biggest Concern: Manual vs. Automated Operations**

- **Current Situation:**
  - Automated functions have some problems
  - Manual backups operations work very good (but not where we want to be)
  - Documentation lacks for many manual operations because these manual operations were non anticipated (Counting on automated operations)
- **Mitigation:**
  - Very good support at ECS/Landover to work off trouble tickets against automated functions needing 'fixes'
  - Excellent ECS operations staff residing at GES DAAC working/learning/'owning' system
  - Documenting manual process until fixes arrive
  - Working closer with MODAPS team where manual operations affect interfaces
  - Formal and informal operations training